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Forest utilization

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FOREST UTILIZATION : Commodity and Subsistance Production among the Semaq Beri of Peninsular Malaysia

Kimball MORRIS

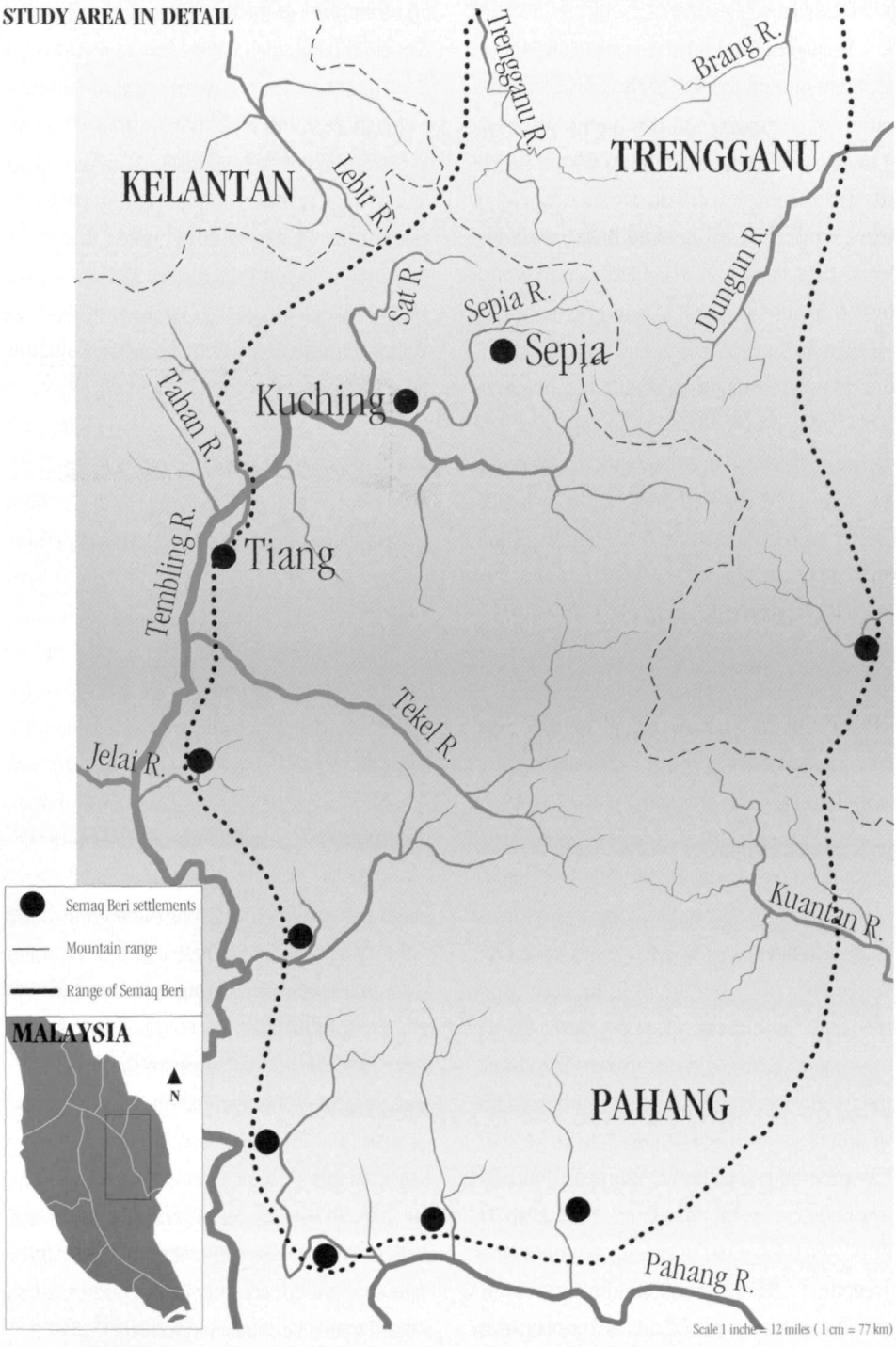
INTRODUCTION

People classified as hunters and gatherers live in many marginal areas of the world and in a variety of environmental conditions. Although there is considerable variation in this ecological adaptation some broad features allow grouping into a single class. In general the outlines of this ecological adaptation are nomadic small groups (8 - 10 families) exploiting naturally occurring resources by foraging over large tracts of land harvesting necessary subsistence and raw materials for tools. They do not practice agriculture or animal husbandry in any systematic way. Several related groups, generally referred to as bands, occupy and use a well-defined territory. These small groups are usually exogamous, that is that they follow certain kinship principles which makes them out-marrying. By marrying out each group circulates its own kin throughout the territory thereby establishing relations to land and resources. This demographic movement is an important feature of hunters and gatherers. It is a successful adaptation particularly in areas of periodic scarcity since people can essentially move in with their relatives and thereby gain access to resources. Hunter-gatherers employ a fairly specialised but simple technology, although in modern times these tools may include shotguns, plastic fishing line, motors, boats[1]. Division of labour is simple and usually based on age and sex. Hunter-gatherer groups are also characterised as egalitarian. They are well known for achieving an equitable distribution of wealth [Woodburn, 1980; Leacock, 1978, 1982]. Relations of kinship as well as other integrating relations [ritual, reciprocity etc.) provide each and every person access to resources in all other areas of the territory associated with a particular band.

Hunter-gatherers have been called «affluent societies» [Sahlins, 1972] because they seem able to produce all of their subsistence needs with as little as three hours on average per day. These statistics are based on a group of hunters that live in the Kalahari desert in Southern Africa, [see Lee 1982]. In rich tropical environments such as Malaysia this average is reduced considerably [Kuchikura, 1987].

The Semaq Beri, an Orang Asli society, are one of several hunter and gather societies, along with Jehai, Temaq, Batek and other Northern Aslian groups in Peninsular Malaysia, exploiting the forest environment in fairly well defined territories for subsistence and commercial products on a permanent basis.

The Orang Asli[2] are the indigenous people of Peninsular Malaysia and are divided into three linguistic groups (Southern, Central and Northern Aslian[3]) including also some groups (Temuan, and Jakun, Orang Laut) that speak only the national language (Malay). There are several different languages spoken in each of these groups and within languages, considerable dialect variation between groups. The Orang Asli who live and exploit isolated areas in Peninsular Malaysia range from settled agriculturists, slash and burn horticulturists[4], hunters and gatherers to coastal foragers (Ma' Betisek) and sea fisherman (Orang Laut). All but a few small coastal groups exploit the forest in various degrees for subsistence and domestic use (house construction, materials for tools etc.) and for commercial products (rattan, gaharu wood, dammars and resins)[5].


STUDY AREA IN DETAIL
Trengganu R.
Brang R.
KELANTAN
Lebir R.
TRENGGANU
Sat R.
Sepia R.
Dungun R.
Sepia
Kuching
Tahan R.
Tembling R.
Tiang
Tekel R.
Jelai R.
Kuantan R.
Semaq Beri settlements
Mountain range
Range of Semaq Beri
MALAYSIA
N
PAHANG
Pahang R.
Scale 1 inch = 12 miles (1 cm = 77 km)

The Semaq Beri are a group of Southern Aslian speakers[6] numbering about 2,000 people [Jabatan Ehwal Hal Orang Asli (JEHOA) Census, 1986] who inhabit territory in the states of Pahang (North of the Pahang river and East of the Tembling river) and in Trengannu (upper reaches of the Kemaman and Brang rivers systems) (See map for details of territory and distribution of groups).

Studies have previously been conducted with one group in Trengannu [Kuchikura, 1987] and a community just north of the Pahang river [Jenson, 1977]. The groups that form part of this study live in the upper reaches of Ulu[7] Tembling. These groups are fairly isolated and accessible only by river. There are essentially four distinct groups living along the drainage system of the Tembling river system, two official government settlements, Pos Sungai Kucing and Pos Sungai Tiang, and two «unofficial» groups at Ulu Sepia and Ulu Tekai.

These settlements were created in the early 60's to «encourage» the Semaq Beri to settle down and quit their nomadic way of life. Two groups in Ulu Sepia and Ulu Tekai are closely related to one of the settlements - Kucing and Tiang respectively. Each of these «communities» is formed of a variety of small bands that exploited this territory prior to the 1960s[8]. The two groups Sepia and Tekai who have no official settlement are composed of people who are reluctant to live anywhere near the settlements administered by the Jabatan Ehwal Hal Orang. These breakaway groups are also linked through marriage exchanges to communities in Trengannu (Kuala Brang) and to communities directly south of the Tekai river. The membership of the communities of Kucing and Tiang is very flexible and although there are families that treat these communities as a home base, the membership is in constant flux. Thus the Semaq Beri form a nation of links throughout the whole territory that these groups occupy. One can find also people living in communities hundreds of kilometres from their birth-place integrated into other communities by marriage or kin links[9]. Kinship is the dominant form of communication and relation but other forms of integration are possible. Access to a community is by permission, in principle never refused, but access to exchange networks and work groups essential to survival is a long process which depends for the most part on ongoing social contributions. Access to Semaq Beri territory by other Orang Asli groups is also by permission[10].

The groups at Sungai Kucing and Sepia are the main focus of this study but much of what is said about this group is applicable to the four communities living on the Tembling river system. In the early 1960s the government created a resettlement on the banks of the Tembling river and persuaded one band that was living upriver to settle. The government provided some housing, an itinerant medic and later a school teacher and canteen[11]. There was originally just a small band of 7-10 families but their numbers increased in the mid 60s as a result of government insistence that the Semaq Beri settle down. By the late 60s according to the appointed headman half of the population had died of some form of epidemic, possibly cholera. The original site was abandon and other houses more appropriate to the climate and habit of the Semaq Beri were constructed near the original site. Magical malediction was

attributed to the land where the site was constructed and it has been left untended to this day. During this period of stress what might be referred to as a macro band fissioned and one group of people moved a short distance away, caused apparently by a struggle between the appointed headman and the traditional leader of the other groups[12]. The site was abandoned in 1984-5 with some people returning to the rainforest, to the other unofficial community in Sungai Sepia or to join the «official» community at Sungai Kucing.

The territory exploited by the Sungai Kucing bands and their related groups comprises the watershed of the upper reaches of the Tembling river above Sungai Tahan.

At Sungai Kucing there are at least three traditional bands using the community of Kucing as home base in 1991. The population of Kucing although extremely variable averages around 100 people. (Possibly as many as 60 people at Sepia[13]) half of which travel to Trengganu, their original home base, for the fruit season.

The Semaq Beri of Sungaig Kucing depend exclusively on the forest for their livelihood. They engage only sporadically in agriculture or swidden farming. Despite considerable effort and pressure by the Jabatan Ehwal Hal Orang Asli to settle and transform the Semaq Beri into agriculturists they remain committed to the forest and dependant on its resources. The efforts by the Jabatan Ehwal Hal Orang Asli, although well-meaning, have been misplaced. In the middle sixties the Jabatan Ehwal Hal Orang Asli provided eight water buffalo as part of an incentive to settle at Sungai Kucing. They also built houses and provided rubber seedlings and helped with developing some padi (rice) cultivation. Unfortunately the water buffalo promptly ate all the rubber seedlings and destroyed the padi fields. Water buffalo do provide a small but irregular income. The Semaq Beri themselves do not eat water buffalo, finding both the meat unpalatable and their habits unclean. Some chickens are raised but they also are rarely eaten. There are a considerable number of fruit trees now maturing in the settlement but these provide only a small portion of the fruit collected in the jungle.

The forest for the Semaq Beri is where they feel most comfortable. The forest is cool and safe, and provides ample resources for adequate nutrition. Indeed studies have shown that their intake of proteins and carbohydrates far exceeds minimum requirements [Kuchikura, 1987]. Orang Asli living at the fringes of jungles or other habitations do not fare as well [Khoo Theam Eng, 1979 : 177] due to depletion of resources close to settled areas. This is not to suggest that the Semaq Beri do not have health problems. Tuberculosis, leprosy and malaria exist and have been treated only irregularly. Medicine for these diseases has not reached this community for more than a year allowing potentially, in the case of leprosy, a resistance to develop to medication. Kudis, kurap, scabbies and lice are endemic to the community. Most of these ailments can be attributed to new living conditions in a resettlement [Khoo, 1979 : 177].

ENVIRONMENT

The Semaq Beri exploit what is known as lowland rainforest which covers roughly 60% of Malaysia, and submontane which covers about 10%. There is an enormous number of harves-

table botanical species, which are distributed widely throughout the rainforest environment. The ecology is highly diverse with many species represented, and few micro-environmental niches. This is in contrast to other environments that hunter-gatherer groups exploit, such as the forests of temperate climates which have low diversity and many more specialised ecological niches Harris, [1969] calls rainforest systems «generalised ecosystems» in contrast to «specialised ecosystems» such as the environment exploited by North American Indians. African Pygmies exploit similar generalised ecosystems [see Bahuchet, 1991 : 206-7].

The lowland rainforest is composed of thousands of species of trees [14], shrubs, herbs, and woody climbers. The upper storey is about 35 to 50 meters high though trees, particularly the «gul» tree or bee tree (*Koompassia excelsa*), grow to 75 meters or more. The upper storey is usually represented by *Dipterocarps* (50%). The main storey about 20 to 30 meters from the ground forms a continuous canopy and is characterised mainly by the families *Burseraceae*, *Gulliferae*, *Myresticae*, *Myrtaceae* and *Popotaceae*. The understorey consists of saplings of the other two upper storeys with members of such families as *Annonaceae*, *Euphorbraceae*, *Flacourticeae*, and *Rubiaceae*. The density of this layer varies from impenetrable to open.

The vegetation on higher hills (submontane) is much less homogeneous than that of the lowlands. The four major forest types are Hill Dipterocarps, Upper Dipterocarps, Montane Oak and Montane Ericaceous. The forest floor is relatively open and forest litter thicker than lowland types.

Corner estimates that there are «between 8,000 and 9,000 species of flowering plants in Malaya and this excludes... ferns, lichens, and fungi and so on» [1952, Preface: p.1]. About 5% of these have been introduced to Malaysia and a small part of the species total represents exclusively strand or coastal vegetation.

The faunal diversity of the Malaya rainforest is as great as the plant diversity [Dunn, 1975 : 39]. Five hundred seventy five species of birds are recorded [Medway, 1963] [15]. Bird populations of between 400 and 500 birds per 100 acres (40.5 hectares) are recorded from several tracts by Mclure [1969].

There are 206 species of mammals in Malaysia [Medway, 1978]. Bats, rodents and carnivores (*Chiroptera*, *Rodentia*, *Carnivora*) represent 83% of all the mammals. There is relatively little segregation ecologically or altitudinally. Medway, [1978 : XIV] estimates biomass per acre to be 4-6 kg. Most Malayan mammals are creatures of the forest and like the birds are distributed vertically. Few mammals except the ungulates and some rats normally reside on the forest floor. Other vertebrates in Malaysia include some 129 species of snakes [Tweedie, 1956], 100 species of reptiles, 50 amphibians, and about 200 species of fresh water fish [Tweedie and Harrison, 1954]. There also exist many thousands of species of invertebrates important to man such as pests, or food sources (crabs, snails, molluscs, prawns, bees, and beetles).

Pahang, the state where this research took place, is, as is common with other states in Malaysia, a river basin. Most rivers in the state drain into the Pahang river which is fed by the Jelai (and

Lepis) in the west and the Tembling and its tributaries in the east.

Peninsular Malaysia has a warm humid climate with average temperatures in Pahang between 25.2° C at Kuala Lipis to 27.4° C for Betong. Annual temperature variations are slight with the exception of daily variation in areas associated with altitude. Average yearly rainfall is between 204 cm for Temerloh and 323.5 cm for the coast of Pahang. From December to January the northeast monsoons bring heavy rains and many rivers are subject to flooding. The Tembling is capable of rising several feet in a matter of hours and in 1926, a record period of heavy rainfall, it rose as much as 36 meters [Cant, 1973 : 115-18].

The soils which are important for agriculture are low humic gley soils which occur close to the coast and are associated with alluvial soils. In the area of study lethosols and shallow latosols which are unsuitable for agriculture predominate.

Shallow red and yellow latosols and pozols can however support permanent tree crops such as rubber, banana, fruit trees, etc. The soil depletion from shifting cultivation is very rapid and after a second or third season most attempts at cultivation are abandon.

Regeneration after shifting agriculture takes place rapidly. Normally after 5 or 6 years a thick growth of shrubs is established. Belukar or secondary forest resembles a mature forest within about 25 years with the exception of the larger trees. Complete regeneration may take as long as several hundred years. Thus this area is rather unsuited to agriculture. Those areas at the mouths of tributaries perhaps more suited to agriculture have already been claimed by Malays.

COMMODITY AND SUBSISTENCE PRODUCTION

Their territory and resources are the life-sustaining force of the Semaq Beri. The forest is their traditional environment and in spite of forced settlement they continue to exploit the forest not only for subsistence but for products that allow them to enter an international market in order to acquire goods and items unavailable in the forest.

It provides not only for all of theire subsistence needs (supplemented with store bought goods such as tea, sugar, canned milk, rice and tobacco) but also provides medicine, materials for houses, and housewares, tools of production, blow guns, digging sticks, poisons for darts and fishing. In terms of subsistence it provides a huge variety of animals for proteins and an enormous supply of carbohydrate and vegetable stuffs. The rainforest in Malaysia is incredibly rich in food resources and for the Semaq Beri the forest is a well stocked and classified storehouse [16]. The Semaq Beri have an intimate knowledge of their territory and the resources they contain.

The Semaq Beri employ very simple tools to harvest forest products, digging sticks for harvesting tubers, blowguns, shotguns and traps for harvesting various animals and birds, hook and line as well as nets and poisons for catching fish.

Division of labour in Semaq Beri society is loosely based on age and sex but this division is not strictly adhered to and supported by no ideology of inferiority or separation of production tasks. Women do and have been known to hunt with blow guns but this is exceptional. For the most part women collect vegetables, tubers and small mammals or go fishing in small groups. Men form small hunting groups (2-3 men) for

daily forays and larger groups (10-15) for longer forays into the jungle (fishing/turtle hunting groups, as well as commodity collecting groups) but may bring back any tubers or vegetables they happen on. Produce from hunting and gathering is divided at the end of the day and thus nothing obligates people to work together again. Binding ties of personal dependence, such as must exist in an agricultural community where division of the product is delayed, requiring people to stick together in order to share the harvest, do not exist in the Semaq Beri community [see Meillasoux, 1981 and Woodburn, 1980]. People change work groups and even settlements regularly. The Semaq Beri are not tied to a particular piece of land, rather they are associated with a territory that is used and occupied, and whose resources all Semaq Beri have access to [17]. However the implications of this flexibility go far beyond a simple demographic movement or ecological adjustment. This flexibility creates and maintains personal social relations with bands in the territory, thereby affirming a relation to the land. It allows access to people and thus to resources. Moreover it reduces the possibility of ties of personal dependence and forecloses on any chance of developing a political hierarchy with inevitable inequalities. Thus leadership is extremely weak in these communities. There are leaders but people follow them because they are wise or skilled. Leaders have no power over allocation of labour, women or organization, and the Semaq Beri use one of the most democratic means for disposing of leaders. They vote with their feet. In other words they just pack up and leave. A leader with no followers is no leader at all. All of these features of social organization have conspired to produce an extremely equalitarian society. In general hunter-gatherer societies are recognised as one of the most equalitarian types of societies we know of in the historical and ethnographic record, [Leacock, 1978, 1982; Woodburn, 1980] achieving a remarkable and equitable distribution of goods within their social groupings.

The manner in which goods get distributed in any society is an indicator of social inequality. The social obligation to share is deeply embedded in the ideology and social practice of Semaq Beri culture. When a hunter returns with a kill the animal is divided and immediately distributed to people in the community. In practice the first distribution network includes usually only five or six families. However each of these families has ties in one way or another to all members of the community and in this way foods items are dispersed throughout the community. Those who may, for one reason or another, miss out on initial and secondary distributions usually receive cooked food after making their needs felt [18]. Part of this equalitarian distribution rests on values of sharing and giving [19].

However, the moral imperative to share is also supported by two powerful notions that determine, to a great extent, equitable distributions. The Semaq Beri recognise that people have needs and desires. Further they believe that should these needs and desires remain unfulfilled a person may enter into a dangerous and vulnerable state. The two states are called *kioy* and *punun*. These are states which you enter when some desire for an object remains unsatisfied, making you vulnerable to accident (*punun*) snake bites, tiger

attacks, cutting yourself with an axe or parang, or falling out of trees, or disease (*kioy*), swollen legs, sick stomachs and fever. There is a moral imperative to help others to satisfy their desires and to make needs and wants known.

In Semaq Beri society one cannot refuse to give material assistance. The only response to requests is to deny that you have any of the desired object. To refuse might amount to murder. These notions (*kioy, punun*) are often employed as levelling mechanisms. When someone in the community is seen to possess more than he needs for immediate consumption or has accumulated expensive objects such as radio, tape player, watch etc., a people in the community will simply go and ask for the object and the owner must part with it. In this way people are regularly detached from material possessions. This form of distribution guarantees, to each and every Semaq Beri, access to food, and other objects which may include productive tools such as blowguns, knives, as well as decorative and luxury items (radios, watches). The system achieves an extremely high level of equal distribution. Abuse of good will is dealt with by ostracising those who do not share. It also functions to integrate individual families through constant food exchanges. This may be one reason why like other hunters and gatherers underproduction is the norm. If people are unable, because of the system of sharing, to accumulate a surplus they are unlikely to produce one. One effect of this is that under-production does not threaten the continued reproduction of their environment and thus this, as well as other factors, acts as a conservation technique, preserving the forest as a renewable resource.

SUBSISTENCE PRODUCTION

Introduction

The Semaq Beri derive a majority of their food requirements from the rainforest. Only in recent years, since the government began pursuing its resettlement program, have the Semaq Beri engaged in horticulture to any extent. Jungle foods are preferred to domesticated animals and vegetables but rice has become, with increased wealth from the collection of rainforest commodities, a regular staple[20].

Little interest is given to gardens except for an occasional flurry of activity between rainforest trips. The cultivation of plant food is not unknown, of course, because at several seasonal camps chillies and ubi keledek (a sweet potato) are frequently harvested during the short stays and replanted before leaving (some are more energetic than others about this occasional horticulture). However, around the resettlement, corn, beans, tubers and eggplant are planted and harvested. Gardens are located in close proximity to houses in contrast to other Orang Asli, who are slash and burn horticulturists and whose gardens are sometimes located miles from their settlements.

In the settlement several species of fruit trees were planted during the original development of the settlement in 1962 to attract the Semaq Beri out of the forest and into a central area that would provide security, medical supplies and educational facilities. A grove of orange trees, as well as rambutan, lengkiang, coconut, longsat, jackfruit, durian, cempedek, nangka, and coconut palms are all producing fruit. In the surrounding Malay settlements there are all of these fruits as well as mangoes, mangosteens, lemon trees, mata

Kucing, belandas, petai, and bananas which provide fruit all year long. Far more important are rainforest fruits and the collection of fruit from abandoned Malay orchards, which will be discussed below.

The Semaq Beri exploit their environment in a most efficient way. They harvest what they happen upon in the rainforest. Although they may go off in the early morning with blowpipes, they may return with mushrooms rather than monkeys. However, extended trips throughout the rainforest are usually goal-oriented, that is turtle/fish trips, honey collecting or commodity collecting trips. Though individual Semaq Beri do not forage for food every day, a small party from the settlement will generally go out each day.

1

Hunting

The Semaq Beri hunt with poison darts and blowpipes one similar to those produced by the Senoi and Negritos [see Endicott, 1969] and also wooden blowguns which seem restricted to Southern Aslian speakers. The Semaq Beri of this area are known for the production and trade of wooden blowpipes which, although heavier and generally shorter, are highly prized by the various groups in the area for their durability.

Blowguns, very powerful and accurate hunting weapons, are used particularly for animals living at the level of the canopy 30-60 meters above ground. Because they are silent several members of a troop of monkeys can be taken by a single hunter. All members of the society are skilled in the use of blowpipes. Children of both sexes can be seen in the late afternoon hunting birds and small lizards with a discarded inner tube of a blowgun and a few darts secreted from their fathers' quiver. Women are said to hunt with blowpipes but I never observed this. It is for the most part a male activity. Male informants said that women did not have the breath to shoot very far. Female informants demurred in the presence of men.

The favoured targets for hunters with blowpipes are monkeys, gibbons and macaques. They provide a good quantity of meat, not only because of their size (about 6-12 kg), but also because they are social animals and several members of one band can be taken at once. Birds, particularly hornbills, giant squirrels, civet cats, slow loris, pangolin and large lizards are also taken with blowguns. Small squirrels and birds are hunted as well, in mid-afternoon or early evening.

When hunting arboreal animals, the hunters walk the ridges dividing water courses listening for the calls of animals, or the distinctive sound of them jumping from tree to tree as they move through the forest feeding. For primates such as gibbons, monkeys, and macaques, the direction that they are travelling is determined and the men position themselves under the troop and attempt to shoot as many as possible before they take alarm and escape through the canopy. The hunters often butcher, eat and distribute the meat in the jungle before transport back to camp [21].

During the late morning and the early afternoon, groups of young, generally unmarried men

will hunt squirrels, civet cats, and large lizards around the settlement. They will range not more than two or three miles. The secondary forest (*belukar*) provides an excellent habitat, for small game and squirrels abound in these places. Although young men are tabooed from eating various lizards, some squirrels, civet cats, and mongoose, they will shoot them and bring them home for the older men to eat. In the pre-dusk hours (6:00 - 7:30) those that desire meat may go out and blowgun squirrels for a late dinner.

The Semaq Beri hunt several species of reptiles and amphibians including land tortoises, various water turtles, frogs, and lizards. The land tortoises are fairly rare in the areas of human habitation, but are still plentiful in the deep rainforest. Tortoises may weigh up to 30 kg and can provide a considerable amount of meat. Two other types of tortoises are hunted : mud turtles and freshwater tortoises. The mud turtles are found in low-lying swampy areas fed by a small stream. The main water course is followed when possible and the mud is probed with sticks or feet until contact is made with the hard shell of the turtle. The second type consists of several species of freshwater tortoise which are found in rivers and can grow to a considerable size (up to 70 kg). They are sought for in the same way as mud turtles but they prefer faster-flowing water and sandy areas.

The Semaq Beri also hunt pigs with government supplied shotguns (two circulate in the community). These guns were given to members of the «home guard» (RELA) for the purpose of national defence. Shotgun shells are fairly expensive and so they are used judiciously. Large game such as pigs, deer, tapir, bear, and occasionally monkeys, are taken with these shotguns. Pigs are hunted by two or three men, (one to shoot and three to carry it out) walking the ridges and listening for the distinctive sound of pigs crunching on roots, and grunts and squeals of the young or, in larger groups with dogs. Pigs supply a considerable and regular amount of meat [22].

On rare occasions a bear, or even a tapir, may be killed. Similarly, deer are fortuitously hunted. Deer are usually sold to Malays along the river for a good sum of money [23]. When large game is caught there is generally some for everyone in the community. The pig is usually brought back in camp with kin members suggesting, to no-one in particular during the butchering, that they haven't tasted pig liver in such a long time; a none too subtle hint of potential *punun*.

Fruit collecting

The fruit season lasts from July to early September and during this time the Semaq Beri eat almost exclusively fruits and nuts. The wild fruit and the fruit from abandoned gardens provide the bulk of the fruit. Groups of men and women will often relocate camp to be near the fruiting trees, sometimes moving far from their usual territory [24]. For the most part the men go out regularly to look for fruit and nuts. Most of the trees in the area are known to the people but often they are not fruiting. There are many trees that are in fruit, however, and collecting groups are always successful. The people walk ridges or elephant trails, peering into the rainforest every so often in order to locate the trees. They are readily seen because most fruit is usually brightly coloured. The larger trees are climbed and the branches of

the tree bearing the fruit chopped down and the fruit picked off them. Some species such as the «tampoi» tree required ritual treatment. Some of the fruit is thrown in seven different directions for the ancestors to consume. Although the whole tree may be destroyed during the harvesting, much fruit is left on the ground for the ancestors and of course for reproduction.

Fruit is not always ripe but if it could be eaten as, say a vegetable, it is picked anyway rather than returning when it has ripened. Green fruit is treated as a vegetable and boiled or fried. Several kinds of nuts are also available at this time and they are collected from the ground. Some, because they are toxic, are prepared and stored in large quantities. The fruit and honey season is a time when inter-band communication is highest. Young bachelors wander in this time of plenty, marriages are arranged, friends visit and old ties are renewed.

Gathering wild plants

Two types of domestic tubers, *ubi kayu* (*Manihot utilissima*), and *ubi keladek* (*Ipomoea batatas*) were grown in 1981-83 but during 1988-1990 no gardens were made; people prefer wild tubers and will make long trips to acquire them. Two wild tubers are highly prized : *ubi wau,* and *takup* (*Discorea esculenta, D. orbiculata*). Several other tubers are occasionally harvested but are not considered as tasty (e.g. *Discorea alata, bulbifera, laurifolia, pentaphylla, scortechinii, triphyla*, and *piscatorum* are all eaten, as well as *silax megacarpa*) [25].

All of the wild tubers have alkaloids *dioscorine* or *dioscorisene* and must be boiled or roasted in order to destroy the alkaloids. The alkaloids and their unknown substances can be either leeched or cooked away, and the Semaq Beri prepare tubers in both ways. During the flood season, the rainforest is unpleasant to walk in and people avoid long trips, preferring to collect tubers and leach them in the river. They fill bamboo containers full and smoke them over the fire. Along with smoked and stored meat plenty of food is available during the «difficult» time.

Everyone harvests tubers as part of the subsistence search. In general groups of women harvest the majority of vegetable food. Women's production groups are cut across generational lines and are made up of sisters and mothers. Men, in contrast, hunt with age-mates for the most part and the composition of their groups varies from a number of possible combinations of age-mates. The residential pattern limits the composition of production groups. Since residence is matrilocal, men have few cross-generational kin with whom they work, but will likely have a few same-age kin who have married into the group. Tubers are dug with a sharpened stick but people planning to look for tubers exclusively will carry a fence-post digger with them into the rainforest. The people will walk through likely areas searching for the climbing vine and follow the vine to the ground. Usually there are several plants in the same area and the rest of the people will fan out looking for the rest of the plants. Some tubers grow near the surface (*gadong, ciug*) while others have roots that extend up to 2 meters into the ground (*wau, takup*). The latter roots require a considerable amount of digging. These tubers are not large (about 5 cm diameter) but several kilos can be harvested from one

plant. Tubers and palm cabbage provide the bulk of carbohydrates but various fern shoots, mushrooms when in season, fungi, various tree shoots and banana flowers are collected.

Fishing

Fish provide a steady supply source of protein for the Semaq Beri. There are a variety of methods that are employed, such as angling, poisoning, netting and fishing by hand. Angling is a daily activity for the most part undertaken by women and small children, but some men enjoy fishing as well and will spend easy afternoons fishing in the small rivers that flow into the Tembling. Generally small groups of women with children that are either old enough to fish on their own or young enough to be carried slung on the backs of their mothers start off early in the morning or late afternoon to fish. Those children between the ages of about four to six will be left in camp with those that are not interested in fishing that day. The fishing party travels to a prearranged place and fishes back to the camp. People that are interested in fishing that day and those that want to fish will accompany them. The amount of fish caught depends on the luck that day and on the amount of effort expended. Generally they will stop fishing when they have enough food for a small meal. If more fish are caught then they will be shared with those that did not do well at fishing or those at home who didn't go that particular day. River fishing with a rod and line provides a small but steady amount of food. People also fish with nets. Two types of nets are used, one a circular throw net and the other a gill net of various gauges. They are not used often but can provide a large quantity of fish.

By far the most productive method of fishing is by hand in pools far upstream. These are organized activities and are generally for several days. They are undertaken in the dry season (June-August) and are much like working holidays. They are for the most part undertaken by the men but in some cases several families will go off together for these activities. Fishing trips are usually combined with turtle hunting as the Semaq Beri travel upstream where the fishing is most productive. The technique of fishing by hand is to find a pool that is naturally dammed so that the fish cannot escape. Most pools are well known to the Semaq Beri. Once a pool has been located, the water is muddied so that the fish are unable to see the people. When the fish are disturbed they attempt to hide in the debris on the bottom of the river bed or among the roots of the trees that line the river bank. The people then dive into the water and feel around the bottom or among the tree roots for the fish. The number of fish taken varies from pool to pool, but on the average about 20 to 30 find their way to the shore. The fish are gutted and placed on a rack over the fire to dry. The fish are rarely dried completely but enough to transport them back to camp. The catch is divided up before heading back to camp. Fish are counted out to all those that participated in the collection but extra fish will be allocated to those with larger families. Fishing by hand is also carried out as people wander through the rainforest on other kinds of collecting activities. A handful of fish can be caught quite readily by feeling under the overhang of the small streams happened on during the course of travelling through the rainforest. Fish poisoning is illegal in Malaysia and the

Semaq Beri do not engage in this activity although they say they have in the past. They readily supplied my botanical collection with samples of *Derris* (tuba root) and were very familiar with this technique. As with fishing by hand a small pool is dammed and the root of the tuba plant is crushed to release the toxic juices into the stream. The fish are stunned and float to the surface where they are collected.

Seasonal round

Harvestable resources, with few exceptions, are available throughout the year. Tubers, and palm cabbage which form the bulk of the carbohydrate diet, and all of the fauna harvested are always available. The exception to this are seasonal products such as mushrooms, certain tree leaves, fruit and honey. These products occur at different times, and when they do occur they are harvested to the exclusion of regular subsistence items[26]. This is particularly true during the fruit and honey season when the Semaq Beri subsist almost exclusively on these products[27].

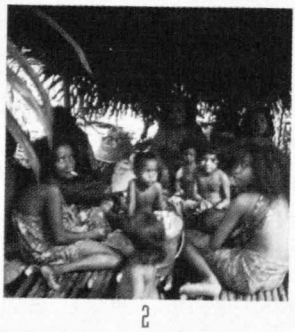
The flood season which occurs during the months of December to January and the rainforest is, at this time, particularly wet and unpleasant to travel around in. Rivers are swollen, jungle trails turn to knee high mud and are extremely difficult to travel on, and tigers come down closer to the river in search of water buffalo and wild pigs who forage there during the wet times. The Semaq Beri prefer not to travel around very much during the very rainy periods and when there is the danger of flooding. The flood months are considered a «famine» time and the preparation of *ohr*[28] is undertaken. The preparation of *ohr* and the harvesting of less desirable tubers is undertaken at this time because of the availability of supply. These tubers are not generally consumed during other times but when they is discovered their location is remembered for future reference. It is important to emphasize that there are literally hundreds of edible vegetable products available to the Semaq Beri and only a small portion of these products are harvested and consumed regularly. As was mentioned above, pigs move down closer to the river and are hunted more vigorously during this period. Much of their meat is smoked and stored above the fire and will be consumed before going out to hunt again. This time is also considered a somewhat dangerous time to be moving about in the jungle for reasons that make sense for their belief system.

Near the end of the flood season the Semaq Beri prepare for the coming of what we would consider spring. This time is prefaced by a ceremony called *bansal*. The *bansal* serves more than ritual requirements for it brings together bands from other areas and gives an opportunity for young people to look each over as potential mates, renews old kinship ties and keeps the group together for a seven day taboo period.

During the early months and the last few months of the year the Semaq Beri engage more often in the production of commodities but there is no strict season for commodity production. From March to September the Semaq Beri collect great quantities of honey and fruit and nuts which are easily obtained. If there is any seasonal or ecological determination of the organization of production, it lies in the fact that the Semaq Beri invariably harvest products that are available

with the least effort and at the time they are available. Thus during the fruit season, for example, the people will exist almost exclusively on fruit supplemented occasionally by store-bought rice and sardines.

After the fruit season is over, the Semaq Beri begin to engage more in the production of commodities. Rattan producing camps are set up upriver and large groups of men go off on collecting trips for several weeks at a time. The rattan collecting camps include most of the members of one of the bands with a few other relatives that have tagged along for the opportunity to make some cash from the collection of rattan. These are camps away from the resettlement and are generally occupied on and off for several months at a time.



2

COMMODITY PRODUCTION

Historical trade

The Orang Asli in Malaysia have been trading with other groups no doubt for some thousands of years. Evidence suggests that trade in forest products between inland and more sedentary coastal groups was occurring by 10,000 B.P. [Dunn, 1975 : 134-135]. Coastal people were trading with Chinese merchants at least as early as 3,000-2500 B.P. and by the beginning of this millennium trade with China was a growing concern [Wheatly, 1970, 1964a]. The earliest written records of the trading of forest products is to China in the 5th century [Wang, 1958]. Wheatley (1961) lists gaharu wood, amber, ivory, rhino horns, tortoise shells, and cowries. During the period 960-1126, Chinese records list ebony, gaharu wood, laka wood, pandan matting, ivory, rhino horns, bee's wax, and lac as products acquired by Chinese merchants from the Malay Peninsula [Wheatly, 1959]. Other products gathered, indigenous to this area such as rattans, Styrax bezoin, dammars, civet glands, bird feathers, and sapan wood are also recorded [Wheatly 1959]. Arab traders list similar products from Malaysia from as early as 850 A.D.

Early ethnologists provided much evidence of trade [Schebesta, 1973; H. D. Noone, 1936 : 96-98; R.D. Noone, 1955; Skeats and Blagdon, 1900, vol. 1 : 27; Anderson, 1824; Evans, 1915, 1920]. Carey, 1979; Denton, 1968; Endicott, 1974, 1975; Gianno, 1990, Howell, 1984, Baharon, 1967, 1976,] all note the importance of trade in forest products.

Forest products

An idea of the specie's diversity can be obtained from the *Dictionary of Economic Products of the Malay Peninsula* [Burkhill, 1966]. Burkhill estimates that 92% of the text is devoted to botanical products and lists 1,751 botanical genera.

The products gathered by the Semaq Beri are considered as minor forest products, major products being timber and firewood. They are by no means insignificant to the national economy and are the major source of cash for Semaq Beri, and most Orang Asli societies. The rainforests of Malaysia contain a variety of commercially exchangeable objects which provide cash to Orang Asli collectors. For the most part, groups of

Orang Asli in the more inaccessible areas are the major producers of these products, although up-country Malays, traditionally middlemen, often collect some products to acquire cash to supplement their subsistence economy.

Traditionally the Semaq Beri have collected an enormous variety of forest products including rattan, gutta-percha, dammar, gums and oils, fibres, incense woods, fruits and other foods, medicinal and poisonous plants, hornbill casques and numerous birds for plumage, bezoar stones, turtle carapaces, honey and bee'swax, dragon's blood and kemenyang. Today the largest source of revenue comes from rattan, honey and gaharu. The other above mentioned products are occasionally harvested when available. In the past gums, dammars (hard resins) and oleo-resins figured significantly (locally for illumination, boat building and medicine and internationally as bases for paints and varnishes largely replaced now by petroleum products, various synthetics and cheaper oils and gums). Some groups like the Semalai continue to harvest keruing, an oleo-resin [Gianno, 1990].

Rattan collection

The principal use of rattan when produced for exchange is as a source of cane, either split for binding and basketry or used whole for furniture.

The largest single source of revenue during 1989 to 1991 was rattan. In one of the bands at Kucing families earned on average 2,500 Malaysian ringgit on rattan alone[23].

Rattans are spiny climbing plants which belong to the *Lepidocayoid* group of the Palm Family. In Malaysia, of the 220 wild species of palms, 123 species are rattans [Whitmore, 1979 : 98]. Peninsular Malaysia is the hub of Southeast Asian rattan distribution. There are 12 genera of rattan comprising about 600 species [Dransfield, 1979]. These palms are ethnobotanically important and have been utilised, perhaps since man first entered Southeast Asia [Dransfield], as a source of cane for basketry, binding, cordage, thatch (*Calamus castineus*) and a wealth of other purposes. Fruits of a variety of rattans are edible but are often sour tasting.

According to Dransfield [1979], Peninsular-Malaysia contributes about 4% of the world trade which in 1977 amounted to about $ 116 million in raw rattan exports. In terms of manufactured rattan articles, Dransfield estimates about M$ 2,744 million. It is by no means an insignificant trade and although much less income accrues to the primary collector (a standard rate would be half of the market value in the nearest town), a substantial amount of money can be derived from this activity. The IMP (Industrial Master Plan) has set a target of $ 400 million ringgit in exports, for rattan furniture alone, by 1995 [*New Straits Times* Dec. 26, 1989 : 8]

For centuries Chinese entrepreneurs particularly in Singapore have controlled and developed this industry. Malaysia, in hopes of developing a rattan industry, imposed a high export tariff on raw rattan and recently a total ban on all raw rattan exports. The rattan trade is a multi-million dollar business but is often extremely loosely and chaotically organized [Dransfield, 1979]. As in most trade in forest products it is an ancient trade and long lines of middlemen protect their interests by keeping sources and contacts secret.

Botanists have long struggled to sort out the relationship between trade names and scientific taxonomy with little success [see Foxworthy, 1922 : 157; Dransfield, 1979; and Whitmore, 1979 : 101]. Species collected have local names but once collected the rattan's name may change from hand to hand or with each sorting. Further confusion may exist because the scientific nomenclature, as Dransfield [1979 : 1] notes, is probably not yet on a sound footing.

It would be hard to imagine a world without rattan in Semaq Beri society. Species of rattan provide cordage for house construction, body decoration, and manufacture of tools including fish and animal traps, blow guns, and even fly swatters. Rattan is used whole or split for a variety of containers, basketware, backpacks etc. Several species of rattan produce a resin collected from their fruits known as *jernang* or dragon's blood. It was traded anciently but is still used as a dye, as a mouthpiece on blowguns (sumpitan), as well as medicine for sick stomachs. Rattan is used for food its fruit, range from sour to sweet, and young shoots are eaten as a vegetable. Rattan features in Semaq Beri mythology and certain taboos surround its collection and use. Today, and well into the past, rattan is an importantly commodity collected and exchanged for money or in kind[30].

The Semaq Beri collect three grades of rattan for sale. The first is a large diameter cane in the form of nine-foot lengths used for furniture. A variety of species are collected in this form, the most valuable being rattan manau (*Calumus manan*). Until recently this was the only rattan species collected as cane. However as manau has become over-harvested, particularly along available river edges and as the rattan industry has expanded, other poorer-quality species[31] have found their way on to the market. The second grade of rattan is a small diameter cane known as *tali gusok*. Several species of rattan are collected for this grade including species of *Calamus, Korthansia* and *Daemonorops* and are bundled in packs of 200. The third grade of rattan is split cane (tali belah empat/enam). And a large variety of species are included together under this trade classification. The rattan is split, decorticated and dried before being bundled into lengths of 100 and bundled together into 1 pack of 20 bundles. This last grade of rattan is labour intensive. The rattan is split, usually, into four (some pieces can be split into six) sections and the inner core removed with a parang or small sharp knife, by splitting it from the outer skin. In this way a thin, flat length of cordage is produced. The width of these lengths of cordage varies slightly between 5 and 8 mm wide and 2 meters long. After splitting, the lengths of rattan are hung to dry for a day or two and then bundled in 20 bundles of 100 folded lengths.

Rattan is collected seasonally[32] and on an ad hoc basis. The Semaq Beri are generally available for rattan collection during the months between August and December as well as March to May. From May to August their activities are devoted to honey, nuts and fruit collection. The latter part of this season may partly devoted to rattan or other commodity production depending on their need for cash and/or insistent demands of creditors; two factors which contribute to the irregular nature of commodity production.

During the flood season and following periods of ceremonial life (December to February)

rattan is rarely collected (nor are any other commodities other than those that come to hand during the subsistence search). Rattan forms part of an array of commodities the Semaq Beri collect; they do not depend on any one commodity. This gives them a great deal of latitude and choice in making production decisions.

The division of labour takes two forms in the production of rattan. Whole canes are almost exclusively collected by men in task groups varying from 2 to 20. Generally 4 to 6 men will work together. These groups may travel upriver and camp for 1-2 weeks collecting cane. Whole canes must be treated within two weeks after cutting or they develop blemishes and rots. The collection of split cane is a much more labour intensive process and generally several families will travel upriver or into the rainforest for a period of up to several months. Since split rattan is dried and bundled it is not necessary to transport it out as quickly as whole canes. Here the whole family participants in cutting, splitting, decorticating and drying the rattan. These trips are much like working holidays for the Semaq Beri and usually take place during April-May and August-September.

Rattan is a renewable resource and if sustainable yields can be managed, it will supply Malaysia with an important source of revenue for years to come. Clearly problems of over-harvesting and a diminishing ecological environment for rattan have become pressing problems in Malaysia. It is a productive and (at this moment of history) fairly constant commodity for the Semaq Beri who in 1990-1991 earned above the poverty line [33] from this commodity alone.

The honey season

The honey and fruit season, which occurs between April and August, is looked forward to with great anticipation and ritual preparation. After the flood season, which ends in late February, a ritual (bansal) is held to call the bees and the flowers of fruit trees down from the heavens. The ceremony lasts about one week and several bands may participate. After the ceremony is over the group is not allowed to disperse for a period of seven days. During this time young people get to know each other and marriages are often arranged. Following the taboo period the various bands disperse to their traditional territory to wait for the bees and the flowers to appear. Several bansals may happen in each of the traditional areas and the Semaq Beri may participate in several ceremonies, particularly young men. This is a time of much visiting between the various groups in the area.

There are three types of bees that the Semaq Beri obtain honey from : «lawoi» (*Apis dorsta)*, «percas» (*Apis indica*), and «ker! tua!» (*Apis florea*). The first produces prodigious amounts of honey, up to 20 kg from a single nest, and builds its nests in the *gul* tree (*Koompassia excelsia*) which is one of the largest and highest trees in the rainforest. It is a large buttressed tree about 75 meters high and branchless to about 30 meters with smooth bark. These bees build their nests on the under side of large branches and as many as a dozen nests may be found in one tree. The second type of bees builds nests similar to the former group but they tend to nest individually on smaller trees. Although they are more easily accessible they are widely separated in the rainforest and are

not subject to communal harvesting; rather they are gathered as they are found individually. The third type, *Apis indica*, nests in the hollows of trees and, although producing smaller quantities of honey, may be harvested well into October.

Bee trees are located during the subsistence search. The number of nests is counted and their development watched for future harvesting. Most of the *gul* trees are known and they are watched to see if they will be good producers. The trees are not owned and access to them is not controlled. They are harvested by those who make the effort. When the nests are ready for harvesting, a small group of men will go out in the forest and search for «tali lang» (a type of rattan) which will be used as a rope to climb the bee tree. The outside thorny bark will be removed and the lengths of this rattan will be crushed by bending it around the trunk of a small sapling in order to remove the pith and make the rattan supple. These lengths will then be wound up and transported to the bee camp or back to the main camp. Large bark baskets that will be used to lower the bee nests from the tree will be made from the bark of the *gaharu tree*, the outside of the bark forming the inside of the basket. Torches are made from the dried bark of house walls and rolled and tied together to form a brush-like torch.

Honey is harvested in the dark. Overcast skies, rain or a moonless night are essential. This is because the bees will not be able to see the men who are smoking them out of the nests.

The *gul* tree is a very tall tree and because it is branchless to about 100 ft with smooth bark and a huge trunk, is impossible to climb straight up. The branches of the tree are reached by climbing trees surrounding the bee tree until a rattan rope can be thrown over one of its large branches. A bridge of sorts, consisting of two parallel strands of rattan, is secured to both trees and the bee hunters, usually in pairs, cross to the bee tree on all fours. It is not work for the faint-hearted.

When they arrive at the nest the gatherers lower another rattan rope and haul up the torches and knives in the baskets. The torches are lit and one man will swat the bees off the nest. Many bees are stunned by the smoke and their wings singed by the torch. Those bees that escape follow the falling embers to the ground where they disperse into the night. Everyone, however, can expect to get stung several times. The bee hunters in the tree do not wash with soap and do not eat certain foods that they say are odorous and will attract the bees. Every precaution is taken to prevent a state of punun (unfulfilled desires) because one of the results of punun is falling out of trees! The people on the ground yell «tagoh» (which means literally «to stick»), at intervals and do not talk about food in case one of the bee hunters gets a craving.

After the bees have been dispersed, the comb containing the larvae is cut away and allowed to fall to the ground. The combs containing the honey are cut away into the basket and lowered to the ground. The bee tree may contain a dozen or so nests and the bee hunters will attempt to collect as many as possible before first light. The group on the ground for their part build small lean-to shelters in which to spend the night, and to protect them from the frequent rain squalls and from the falling bees. When the basket is lowered to the ground, one person will generally pick it up and carry it some distance from the tree and from

the shelters. The combs are cut up and stuffed into large biscuit tins.

Honey production is a communal (band) effort and other than commodity production, forms the largest production unit. The 1990 season produced over 300 litres (15-20 $M/litre) which were sold. The rest was consumed or bottled for the year. In the past it was sealed in bamboo containers and buried in regular spots.

Gaharu wood collecting

Gaharu (*Aquilaria malaccensis*, and *agallocha*) and Chandan trees (*Wikstroemia candolleana*) produce a pathologically diseased, fragrant wood found throughout northern Pahang. Burkhill notes that «possibly only half of the species admitted to the genus are subject to the disease, or liable, in disease, to yield the resin infiltrated wood...» [1966 : 199]. It has a long, if obscure, trade history. Rated as highly prized during the Sung Dynasty [Wheatly 1959] and used as incense, perfume, medicine, charms and cosmetics [Miller 1969] it has had an irregular if not constant demand. Prices for gaharuwood in Ulu Tembling have risen steadily since the Japanese invasion, with most of the incense going to the Middle East, keeping domestic prices rather high. Prices for top grade gaharu average $M 2.00 /gram. Some trees can produce upwards of 133 kilos [Skeat, 1900 : 208], but this seems extraordinary. Gianno, [1990 : 100] cites Semelai recording two trees that produced M$ 20,000 and M$ 7,000 respectively. Certainly many trees produced between M$ 2,000 and M$ 5,000 and were found several times a year, making it worth the low success rate[34].

The production of this commodity differs a little from the production of rattan. In this case the men usually go out in groups by themselves as they do when off on short fishing/turtle hunting expeditions. The gaharu collecting group is usually made up of men from a single band. The collection of gaharu wood gives a great deal of cash to the Semaq Beri and it is an enterprise in which all wish to engage.

Sometimes several kin groups might meet in the rainforest but they rarely go out together. The trips to search for this incense wood alternate between returning to old trees and searching for new ones. Some of the old sites are returned to year after year because as the heartwood rots, leaving the hard resinous pieces the Semaq Beri can sift through the mud for gaharu wood. People rarely harvest all the gaharu wood in any tree.

MIDDLEMEN AND THE SEMAQ BERI

The Semaq Beri, like most Orang Asli in Malaysia, rely on a string of middlemen to bring their products to market, and "middlemen" is an appropriate name for traders that span the distance separating forest collectors and capitalist markets. Their role is to exchange products from one mode of production to another and thus they are a connecting link that allows goods to flow from one system to another. They accumulate capital by buying cheaply and selling dearly. They don't attempt to organize production themselves and rely on each group to produce products on the basis of their own mode of production [Marx, 1972 : 327, 332]. Exchange controlled by middlemen between two modes of production (or rather people producing in these systems) is a

double movement. In the situation in Ulu Tembling a middleman not only buys forest products as cheaply as he can but also sells dearly, to the Semaq Beri, products from the «outside». His relations to the outside are identical. He sells forest products dearly and buys as cheaply as he can products produced in the outside system. In this way he makes a profit each time he exchanges goods between the systems.

The Semaq Beri at present deal with 2 traders, one at Kuala Sat, and the other in Ulu Sg. Sat. They have not always done so[35]. The competition between middlemen in this area ensures that prices for goods from the outside remain, if not a bit artificially high, at least fairly constant. Competition in buying forest products is also high, and although the prices are somewhat low, they keep step with market prices in Jerantut. While not denying that the middlemen in Ulu Tembling are capable of making enormous profits there are market forces that modify their ability to exploit producers.

There are as many middlemen in the Ulu Tembling area as there are people able to attract and hold the productive services of forest commodity collectors. Thus competition between middlemen modifies the potential for excessive exploitation. The critical problem for middlemen is to try and develop long-term relationships with groups of producers. They do this by advancing credit. Thus as the debt grows so does the obligation to produce things for sale. In the Semaq Beri case the two middlemen who buy jungle produce also supply the Semaq Beri with store goods such as tea, tobacco, sugar, tinned milk, rice, soap, pots, knives etc. on credit and in order to discharge the debts these middlemen encourage the Semaq Beri to produce forest products for sale. This relationship endures as long as a debt remains. When a Semaq Beri pays his debt he signals to the middlemen that the relationship is at an end, no reciprocal obligation exists and he is changing allegiance to a new middleman.

A middleman in order to deal with the Semaq Beri must fulfil two conditions. First he must supply credit in the form of goods on a regular basis and secondly he must provide the means to discharge the debt. Relations with the Semaq Beri are maintained by the middleman through credit relations during times when he holds no contracts for rattan or other commodities.

I have indicated some of the factors that contribute to egalitarian relations with regard to access to resources, the distribution of products of labour, the lack of political authority in this society as well as the relation-ship between subsistence production and commodity production. Subsistence production's importance cannot be underestimated nor can the fact that the Semaq Beri rely on the rainforest for all of their needs (including of course products sold in the market for cash). The fact that they rely on the rainforest for their subsistence (including materials for housing, medicine, tools of production and storage containers etc.) allows them at the same time immediate access to forest products for sale. This is an important fact for a number of reasons. It means first that collection of commodities for sale can be accomplished on the basis of traditional subsistence activities. No reorientation to a new environment is necessary, no re-tooling to engage in production for exchange and they can at the same

time as they are collecting products for exchange produce their own subsistence. It is not unusual to find the Semaq Beri stopping work to collect tubers or go off after monkeys in the middle of rattan collection. Subsistence production takes precedence over commodity production[36]. The immediate result of the fit between the production of commodities and subsistence production is that the Semaq Beri are not required to alter their production techniques or social division of labour in order to produce for exchange. Secondly they are not required to produce what may be called exchange value in order to subsist. Thus the incentive that increasingly drives full-time commodity producers and all wage labours to produce exchange value, so that they might purchase in the market the necessary means of subsistence, is absent from the Semaq Beri mode of production. This fit also provides the Semaq Beri with a competitive edge on others, who by virtue of other obligations (agricultural rhythms, rubber tapping, gardens) and restrictions (lack of knowledge of the forest and food taboos) are generally excluded from full-time forest collecting. This allows the Semaq Beri not only to produce cheaper but it also allows them to control their labour, that is, to refuse to collect commodities when prices are low or becoming over-harvested. This is in contrast to full-time commodity producers who when faced with falling prices of their commodity or inflation in the market of goods must produce, more thereby creating a cycle which can lead very quickly to over-harvesting of resources. The danger of overharvesting will come when the subsistence base is threatened.

3

There is a significant difference between those that work to live rather than live to work with regard to some very important things including control over one's own labour and labour time and the right to control the allocation of one's own labour to other productive activities that may not be financially rewarding but may be personally or socially important.

There is however a dark side to the attachment to the market. The Semaq Beri bear the responsibility for their own reproduction costs, whereas in the case of full-time commodity producers and wage-labourers in capitalism the return for labour must at least meet minimum subsistence requirements and this must be reflected in the price of the commodities that they produce. The Semaq Beri in contrast produce their own means of subsistence and it is on this basis they produce forest commodities. They are able to produce cheaper than other commodity producers but they do not generally get the benefit of this competitive edge. However, because they do not rely on commodity production to survive nor rely on any one commodity this gives them the flexibility to control their own involvement in the trade and in some way control supply and influence prices.

One sure way of impoverishing the Semaq Beri would be to destroy or seriously curtail subsistence production. The value of this kind of production goes far beyond the economic for the

Semaq Beri. Their area is their home and it would be indeed tragic if the means to produce their subsistence was destroyed. This has not yet happened in Ulu Tembling partly because it is inaccessible except by river and an area protected in the south and west by the National Park (Taman Negara), in the east by a forestry reserve[37] and in the north by mountain ranges. However it is happening in other areas and one of the main reasons the Batek of the Lebir are moving down into the National Park (headwaters of the Sat river). Even if the Federal government (responsible for Orang Asli affairs) had the will to set aside territory or gazetted areas which they do not seem to have, land is controlled by the States, causing considerable legal and political complications [Hooker, 1990].

The government wants integrated the Semaq Beri into national life. This agenda does not recognise that they are already well-integrated into the national economy without government assistance (in some cases in spite of government assistance) and it seeks to transform them into settled and impoverished agricultural producers, dependant as Malays are on a single commodity (rubber), and in competition for land and resources with those that are already installed in the area[38]. At present they have considerable control over their labour and are able to produce a standard of living not much different than Malays in their area without accepting that mode of production. Indeed their standard of living has improved in the 13 years I have known them (several boats and motors as well as three Malay-style houses). They remain however as committed to subsistence production as they were during the first period of field work in 1981[39].

ENDNOTES

1
Modern equipment such as motor boats and guns are easily integrated into hunter gatherers social systems. They are not a defining feature of these types of social organization and the idea that these modern tools allow over-harvesting presupposes both a will and a social organization that permits it.
Over harvesting the problem is not but the diminishing resources that in turn force these kinds of societies to look for other means of providing a livelihood. Mechanisms of sharing and demand gifting preclude the possibility of accumulation. Under-production is the norm in these societies [Lee and Devore, 1968].

2
Orang Asli aboriginal people of Malaysia translated as «first people». They number about 60,000.

3
The Aslian language family belongs to an ancient or Proto Mon Khmer Aslian likely spoken prehistorically in Indo-China by indigenous hill tribes [Diffloth, 1979; Benjamin,1976].

4
This group, by far the majority.

5
According to a 1969 Jabatan Ehwal Orang Asli survey, approximately 60 % of the Orang Asli live in the deep rainforest, others live in rural but accessible areas.

6
This group belongs along with Ma' Betesik (Carey Island), Semelai and Temoq, who have disappeared from JEHOA statistics, to the Southern Aslian branch of the Mon-Khmer family. Although they belong to the same language group, they are separated by a wholly inadequate official classification of Negrito, Senoi and Proto-Melayu which is based for the most part on dubious racial classification. Since language is a repository of much of the cultural and social knowledge of people it would make a great deal of sense to reclassify these ORANG ASLI groups by linguistic affiliation. Some work has been done on Jakun, a so-called Proto-Melayu society, who speak a Malay dialect, showing, or at least arguing convincingly, that they were probably originally Aslian speakers (Collins). Further work may eliminate the need for the Proto-Melayu classification altogether.

7
Ulu means «headwaters» in Malay.

8
Prior the resettlement of Malaysia the northern groups (Kuching and Sepia) were divided into at least 7 small bands well distributed throughout the territory they continue to exploit.

9
One institution that ensures regular communication between bands is «wanderings bachelors» - small groups of age-mates who travel to other bands often looking for wives and living for a time with the band.

10
Batek from the Lebir river in Kelantan have for the past few years been living in the Upper Sat river pushed south by increasing forestry in their area. They harvest bamboo for blowguns as, the Semaq Beri do from one specie of bamboo (thinly dispersed in the territory) and they always stop by to ask permission. Traditionally the Semaq Beri would harvest it for them.

11
These efforts were all abandoned in 1985.

12
This «struggle» was about who should be the external affairs headman. The government-appointed leader did have followers which is the criteria for leadership. The others chose not to follow the government-appointed leader and moved away (only a short distance) to establish their own camp.

13
This group which has a permanent settlement in Trengganu is originally from Pahang and spends about half of the year in the Sepia region of Ulu Pahang returning usually during the fruit and flood season to their JEHOA-sponsored settlement. There is no mention of these people who are transhumant in Kuchikura's ethnography so I can't tell if they are part of his population figures. They knew him and had many stories about him. I had visited this group for a ritual dancing/trancing session in Ulu Sepia and during breaks the Semaq Beri would compare their anthropologist's language, vocabulary and forest knowledge.

14
Usually up to one hundred different species with a girth of more than one foot are found to the acre [Smith, 1964 : 203-4].

15
About seventy-five percent of these are resident [Medway, 1965].

16
Species of flora and fauna are named and classified as well as their locations, habits, and seasons. Modern zoologists and biologists in many countries have begun to appreciate the depth of knowledge of hunters and gatherers who live and utilise forest resources.

17
Band flexibility is the term used to describe the movement of people from one group to another within a territory [Turnbull, 1968]. See also Bahuchet [1991].

18
This is done in a member of ways. Sending children to eat at houses that have received meat, or talking locally and to no-one in particular that they haven't tasted a particular food item in a long time and wouldn't it be nice of there was some around to taste.

19
Perhaps the distribution has ecological reasons such as the inability to store for long periods of time food items thereby forcing people to share so it will not be wasted [Testart 1982].

20
In this article I have not discussed the cultural reason and some of the ritual reasons for their preference for forest foods and the forest itself as well as the value given to these foods over store-bought foods. In general notions of hot/cool : settlement/forest : disease/health are important features of their ideology. They prefer cool/forest/healthy to hotsettlement disease. These cultural ideas are the subject of another paper.

21
Much of what is caught is eaten on the spot, and a great deal that is brought home is done with great secrecy,(lest demanding relatives appear at the door). For this reason it is very difficult to measure the amount of resources harvested but besides this it would have been too pointed and delicate a question to receive accurate information.

22
Pigs are very plentiful close to inhabited areas or in abandoned gardens and rubber plantations. These plantations provide a good environment for pigs. Secondary forest (belukar) is also good pig habitat, but too thick with scrub brush to hunt in effectively.

23
This is sometimes a cause of bad feelings when individuals sell meat to the Malays. It is often given as a gift however.

24
One such group from the Sepia river camped in the upper reaches of the Sat river about 4 or 5 miles from the resettlement of the Kucing people. Not an incursion, the event was seen as a time for visiting by the people at Kucing and several families went off to join this small group for fruit harvesting.

25
I suspect it was for my benefit that we ate this last named tuber, because they are often bitter and require a great deal of preparation.

26
When I complained that I was tired of eating mushrooms at every meal and refused the offer of them on several occasions, I was told that I had better eat them now because they would not be available soon.

27
There are of course seasons when some animals are more plentiful than others but in general animal proteins and tubers (the staples) are available throughout the year.

28
This food is leached tubers of many varieties (any gardens that have tubers (*ubi kayu*) are ravaged at this time) grated with a spiny sheath of a rattan stuffed into large bamboo containers and smoked over the fire.

29
This represents an average of 5 households surveyed at Kucing. They were the people that I lived with probably the most productive group.

30
An important characteristic of forest products that the Semaq Beri collect is that unlike minerals and oil which are called non-renewable resources, forest products are, with proper conservation and management, capable of reproduction as a resource for as long as there are forests in Malaysia.

31
Probably *Calumus ornatus*. This species of rattan has not been collected by the Semaq Beri before in any quantity. It is therefore quite plentiful. These two types of rattan are further graded by diameter. Manau has two grades : cane under 1 3/8 inches in diameter and over 1 3/8 inches. The other cane collected (*Calumus ornatus*) has larger specification since it is probably decorticated and stained and used as a rattan manau substitute [Dransfield, 1979 : 29].

32
Although depending on the pressure from middlemen and their debt load individuals may collect it at any time.

33
Poverty line calculations include food baskets which the Semaq Beri find readily in the jungle and supplement with a few store bought products - notably rice, sugar, tea and tobacco. The poverty line statistic is meant to indicate the relative affluence of the Semaq Beri. Poverty income calculated as a food basket and minimum living expenses by a World Bank report is 2,400 Malaysian ringgit [Scott, 1985 : 9].

34
In relative terms the cash acquired from the sale of gaharu wood is greater than any other type of commodity production. Although gaharu wood production is significantly less labour, rattan and honey production is much more reliable in terms of availability in supply and consistency of sources.

35
Since 1981, the first period of research, the people at Kuching have dealt with a string of at least 6 different middlemen/creditors.

36
Over several years of research with the Semaq Beri I have never seen them purchase any animal proteins and rarely vegetable stuffs. When they have money they will buy rice to supplement wild tubers but they usually spend money on tinned milk, tea, sugar, biscuits and treats for the children and for productive tools, knives, boats, motors, gas, etc. A considerable amount is spent on luxury items, probably more than on any foodstuffs.

37
There was a government forestry road constructed in 1987 through this forestry reserve which is now impassable (technically only for government access) and recently a road constructed to the headquarters of the National Park (Tahan River).

38
This area is not even self-sufficient in the production of rice, the national staple.

39
Subsistence production for the Semaq Beri has a high value they prefer rainforest foods. Although in the community they have chickens and water buffalo they do not eat them. These foods are considered not only unpalatable but somewhat dangerous since they are raised in a «hot» environment and therefore considered potentially diseased. They are sold to Malays.